AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Previously Presented) A double-layer capacitor comprising:

a first electrode having a first polarity;

a second electrode having a second polarity, the first polarity being different from the second polarity; and

an electrolyte that is in contact with the first electrode and the second electrode,

wherein the first electrode has a first charge of the first polarity and the second electrode has a second charge of the second polarity, and wherein maximum values of the first charge and the second charge are substantially equal.

2. (Currently Amended) ~~A~~ The double-layer capacitor of claim 1, ~~comprising:~~

~~a first electrode having a first polarity;~~

~~a second electrode having a second polarity, the first polarity being different from the second polarity; and~~

~~an electrolyte that is in contact with the first electrode and the second electrode,~~

wherein the first and second electrodes have first and second surfaces, respectively, the first and second surfaces being different.

3. (Previously Presented) The double-layer capacitor of claim 2, wherein the first and second surfaces have different sizes.

4. (Previously Presented) The double-layer capacitor of claim 2, wherein the first and second surfaces comprise a same type of material, and wherein the first and second surfaces have different masses.

5. (Currently Amended) The double-layer capacitor of claim 1 ~~2~~, wherein a product of

$$Q^{+}_{V,\,max} V^{+} = Q^{-}_{V,\,max} V^{-}$$

is approximately equal for the first and second electrodes, where Q corresponds to electrode charge and V corresponds to electrode volume.

6. (Currently Amended) The double-layer capacitor of claim 1 ~~2~~, wherein the first electrode and second electrode comprise a same type of electrode material; and

wherein a product of

$$Q^{+}_{M,\,max} M^{+} = Q^{-}_{M,\,max} M^{-}$$

is approximately equal for the first and second electrodes, where Q corresponds to electrode charge and M corresponds to electrode mass.

7. (Currently Amended) The double-layer capacitor of claim 1 ~~2~~, wherein at least one of the first and second electrodes comprises carbon.

8. (Currently Amended) The double-layer capacitor of claim 1 ~~2~~, wherein at least one of the first and second electrodes comprises: carbon powder, carbon fabrics, de-metallized metal carbides, carbon aerogels, graphitic carbon, nanostructured carbon, and PVD and/or CVD carbon.

9. (Currently Amended) The double-layer capacitor of claim 1 ~~2~~, wherein at least one of the first and second electrodes comprises a conductive polymer, a conductive ceramic, a metal, and a metal alloy; and

wherein the first and second electrodes have differently sized surfaces.

10. (Currently Amended) The double-layer capacitor of claim 1 ~~2~~, wherein the electrolyte comprises at least one of a gel electrolyte, a polymer electrolyte, and a liquid gel electrolyte.

11. (Currently Amended) The double-layer capacitor of claim 1, wherein the electrolyte comprises a solution comprising organic and/or aqueous solvents; and

wherein the double-layer capacitor further comprises:

a separator between the first and second electrodes.

12. (Previously Presented) The double-layer capacitor of claim 11, wherein the separator comprises paper, polymer membranes, or glass fibers.

13. (Currently Amended) The double-layer capacitor of 1 ~~2~~, wherein the first and second electrodes are stacked; and

wherein the double-layer capacitor comprises at least one separator between the first and second electrode layers.

14. (Previously Presented) The double-layer capacitor of claim 13, wherein the stack defines a coil.

15. (Currently Amended) A pseudo-capacitor comprising the double-layer capacitor of claim 1 ~~2~~;

wherein the at least one of the first and second electrodes comprises metal oxide or conductive polymer.

16. (Currently Amended) A capacitor battery comprising the double-layer capacitor of claim 1 ~~2~~.

17. (Previously Presented) A method of reducing a difference between maximum charges of a first electrode and a second electrode of a double-layer capacitor, the first and second electrodes comprising an electrode material, the method comprising:

obtaining a non-corrosion potential range of the electrode material relative to a reference electrode;

obtaining maximum charges of the first and second electrodes relative the reference electrode, the maximum charges being within the non-corrosion potential range; and

adjusting the maximum charges so that the maximum charges are closer in magnitude.

18. (Previously Presented) The method of claim 17, wherein obtaining the non-corrosion potential range comprises:

obtaining a potential difference between the first and second electrodes and the reference electrode; and

measuring a corrosion current between the first electrode and the second electrode at the potential difference; and

wherein obtaining the maximum charges comprises integrating current into the first electrode.

19. (Previously Presented) The method of claim 17, wherein adjusting comprises increasing a size of a surface of an electrode having a lowest maximum charge.

20. (Previously Presented) The method of claim 17,

wherein the first and second electrodes comprise a same material and have same dimensions when the non-corrosion potential range is obtained and when the maximum charges are obtained; and

wherein adjusting comprises increasing a mass of an electrode having a lowest maximum charge.

21. (Previously Presented) The method of claim 17, wherein, during adjusting, a product of

$$Q^{+}_{V,\max} V^{+} = Q^{-}_{V,\max} V^{-} \text{ or } Q^{+}_{M,\max} M^{+} = Q^{-}_{M,\max} M^{-}$$

is approximately equal for the first and second electrodes, where Q corresponds to electrode charge, V corresponds to electrode volume, and M corresponds to electrode mass.